

**Work Order ID 70158**

Monday, May 30, 2011 12:42:14 PM



Page 1

Item ID: D4149-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Lug Assembly, Aft

Start Date: 5/30/2011 Start Qty: 4.00



Cust Item ID:


Required Date: 6/8/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan: 

Date: 11-05-30

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4149

C

100

0.00



Small Fab

Memo

0.00

Small Fab

1- Assemble as per dwg

 11/06/06 (4)

110

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 w/06/06

(x4)

120

Identify as per dwg &amp; Stock Location: 468

0.00



Packaging

Memo

0.00

Packaging

11/06/06 (4)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 70158**

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Page 2

Item ID: D4149-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Lug Assembly, Aft

Start Date: 5/30/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/11

MF  
11-06-06

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Monday, May 30, 2011 12:42:20 PM

Page 1

Work Order ID: 70158

Parent Item: D4149-041

Parent Item Name: Crosstube Lug Assembly, Aft



Start Date: 5/30/2011

Required Date: 6/8/2011

Start Qty: 4.00

Required Qty: 4.00

## Comments:

IPP Rev:A 10.06.24 new issue DD verf:EC

IPP Rev:B 10.07.22 as per revB DD verf:JLM

11.03.03 as per revC DD verf:JLM

IPP Rev:C

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MS21043-3

Purchased

No

100

Each

452.0000

4

8



Nut

### Location

### Loc Qty

### Loc Code

FG

80

103691

80

ST301

372

112314

372

MS21043-4

Purchased

No

100

Each

1,640.000

1

12



Nut

### Location

### Loc Qty

### Loc Code

FG

40

104603

40

ST300

512

117423

512

ST301

1088

114784

48

115936

40

117601

500

117793

500

*Ep 5/11/06/06*

*Ep 5/11/06/06*

*12*

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Monday, May 30, 2011 12:42:20 PM

Page 2

Work Order ID: 70158

Parent Item: D4149-041

Parent Item Name: Crosstube Lug Assembly, Aft

Start Date: 5/30/2011

Required Date: 6/8/2011

Start Qty: 4.00

Required Qty: 4.00

D3910-1  
Crosstube Lug

Manufactured No

100 Each

18.0000

1

4

Location

Loc Qty

Loc Code

st507

18

68263

2

68867

16

Manufactured No

100 Each

3.0000

1

4

Location

Loc Qty

Loc Code

ST460

3

68868

3

Manufactured No

100 Each

16.0000

2

8

Location

Loc Qty

Loc Code

ST133

16

68869

1

69604

15

D4149-3

Spacer

Manufactured No

100 Each

13.0000

1

4

Location

Loc Qty

Loc Code

ST133

13

68870

13

Monday, May 30, 2011 12:42:21 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries



# Picklist Print

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Page 3

Work Order ID: 70158

Parent Item: D4149-041


Parent Item Name: Crosstube Lug Assembly, Aft

Start Date: 5/30/2011

Required Date: 6/8/2011

Start Qty: 4.00

Required Qty: 4.00

D4149-5  
  
 Eyebolt Stud


Manufactured No 100 Each 16.0000 1 4



*EB 11/06/06*

Location Loc Qty Loc Code

ST133 16  
 68871 16

AN3C12A  
  
 Bolts


Purchased No 100 Each 72.0000 2 8



*EB 11/06/06*

Location Loc Qty Loc Code

ST351 72  
 116924 6  
 117514 36  
 117794 30

~~AN4C13A~~  
  
 BOLT


Purchased No 100 Each 93.0000 3 12



*EB 11/06/06*

Location Loc Qty Loc Code

ST357 90  
 114615 32  
 116199 8  
 117793 50  
 ST361 3  
 117688 3

MS20615-4M18  
  
 Rivet

Purchased No 100 Each 218.0000 3 12



*EB 11/06/06*

Location Loc Qty Loc Code

ST323 218  
 117411 218

*12*

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Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Monday, May 30, 2011 12:42:21 PM

Page 4

Work Order ID: 70158

Parent Item: D4149-041

Parent Item Name: Crosstube Lug Assembly, Aft

Start Date: 5/30/2011

Required Date: 6/8/2011

Start Qty: 4.00

Required Qty: 4.00

NAS1149C0332R

Purchased

No

100

Each

2,182.000

4

16



Washer

Location

Loc Qty

Loc Code

ST297

2182

116304

55

117291

1527

117460

600



*EP 5/11/06/06*

*16*

NAS1149C0432R

Purchased

No

100

Each

6,014.000

6

24



Washer

Location

Loc Qty

Loc Code

ST297

6014

116900

1014

117291

5000



*EP 5/11/06/06*

*24*

Monday, May 30, 2011 12:42:21 PM

Shop Packet Print

Page 4

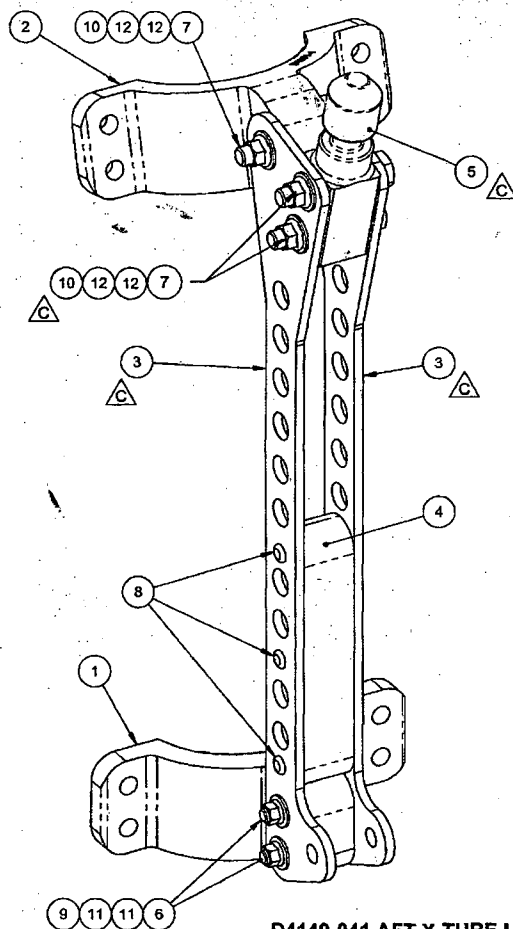
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DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries



**D4149-041 AFT X-TUBE LUG ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4149-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 2.21 lbs

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 10151  
2/11-05-3U

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4149-041	AFT X-TUBE LUG ASSY
1	1	D3910-1	X-TUBE LUG
2	1	D4091-1	MOUNTING LUG
3	2	D4149-1	AFT X-TUBE LUG PLATE
4	1	D4149-3	SPACER
5	1	D4149-5	EYEBOLT STUD
6	2	AN3C12A	BOLT
7	3	AN4C13A	BOLT
8	3	MS20615-4M18	RIVET
9	2	MS21043C3	NUT
10	3	MS21043C4	NUT
11	4	NAS1149C0332R	WASHER
12	6	NAS1149C0432R	WASHER

C	HOLE DIA CHANGED TO 0.252" (D3-3); HOLE DIA CHANGED TO 0.250" (C2-5); REPLACED QTY(2) AN3C12A, MS21043C3 AND QTY(4) NAS1149C0332R WITH QTY(2) AN4C13A, MS21043C4 AND QTY(4) NAS1149C0432R (D3-1, D7-2)	SC	11.02.22
B	MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); ADDED D4149-5 (SHT 5); D4149-5 WAS D3909-5 (ZN D3-1 & D7-2); REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1, C7-1, B7-2 & B3-2); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN D8-3) REASON: SEE TR-D350-807-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION	BY	DATE
DESIGN	MB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4149	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		AFT X-TUBE LUG ASSY	NTS
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

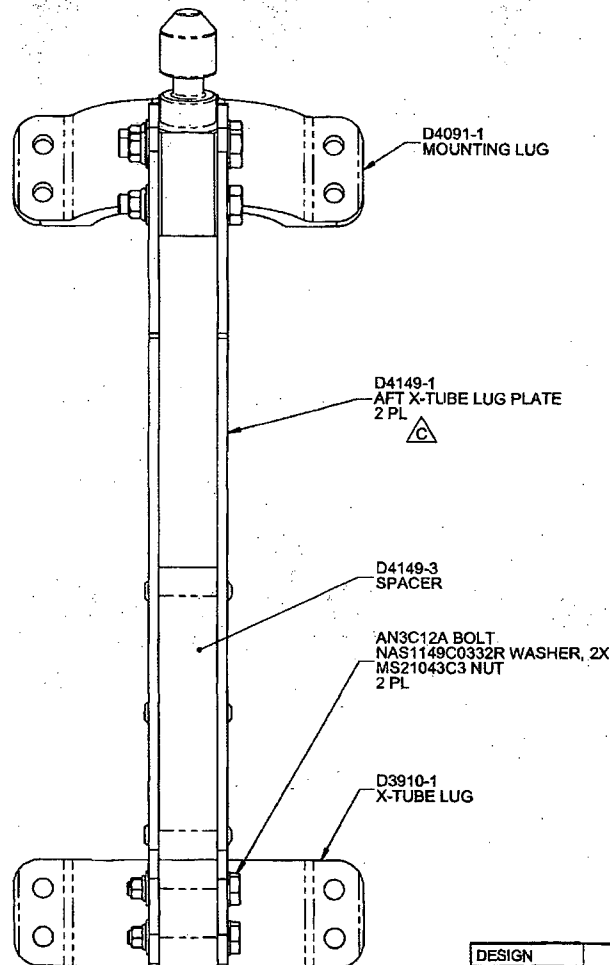
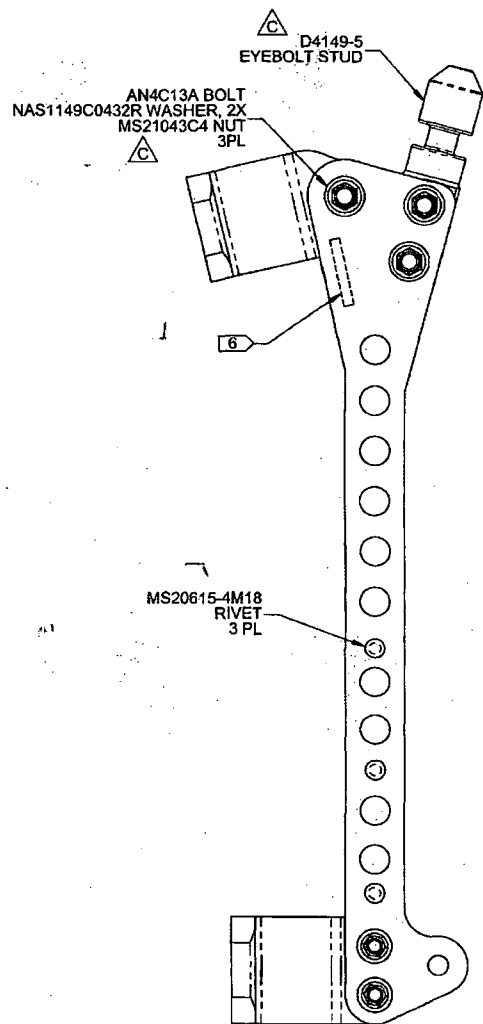
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1



410 70158

RELEASED  
2011-02-24  
MP

**D4149-041 AFT X-TUBE LUG ASSY**

DESIGN	MB	<b>DART AEROSPACE LTD</b> HAWKESSBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED		DRAWING NO. <b>D4149</b>	REV. C
MFG. APPR.			SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		<b>AFT X-TUBE LUG ASSY</b>	NTS
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

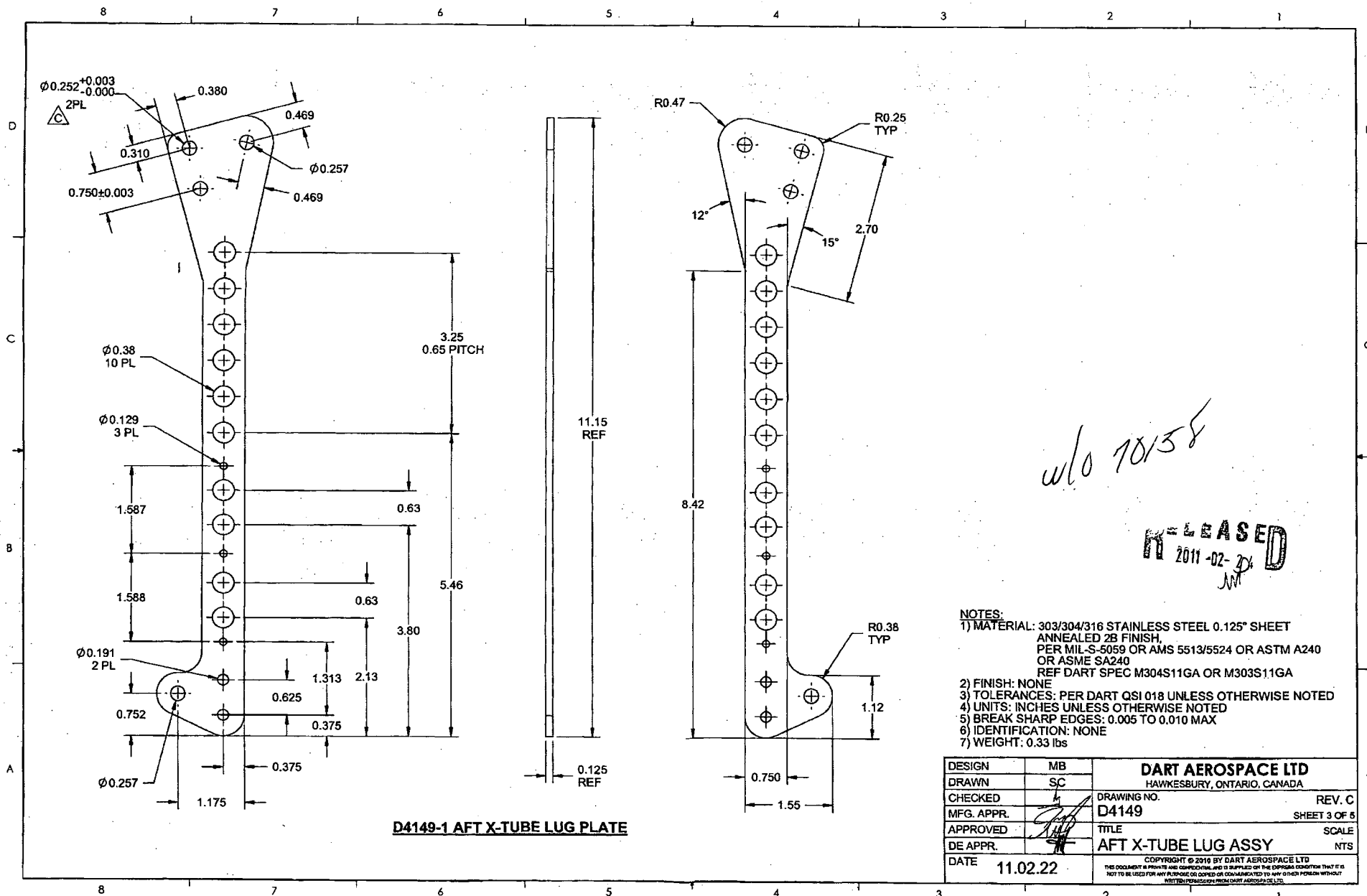
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries





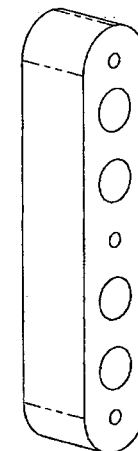
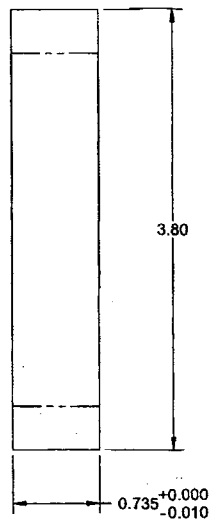
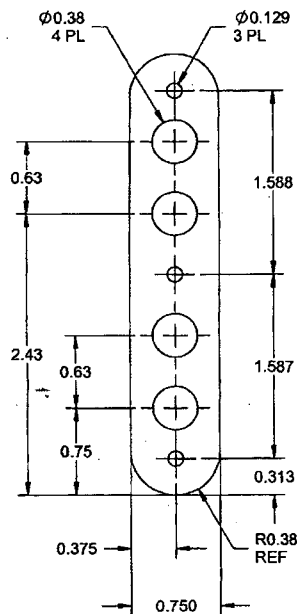
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**NOTE:** Date & initial all entries



**D4149-3 SPACER**

*u10 70158*

**RELEASED**  
2011-02-22

**NOTES:**

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A276 OR A582  
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.47 lbs

DESIGN	MB	<b>DART AEROSPACE LTD</b>	
DRAWN	SC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		<b>D4149</b>	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		<b>AFT X-TUBE LUG ASSY</b>	NTS
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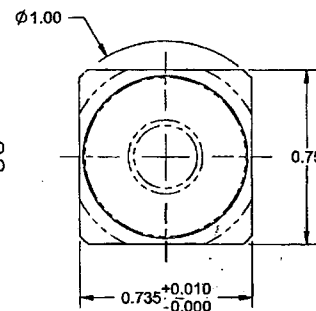
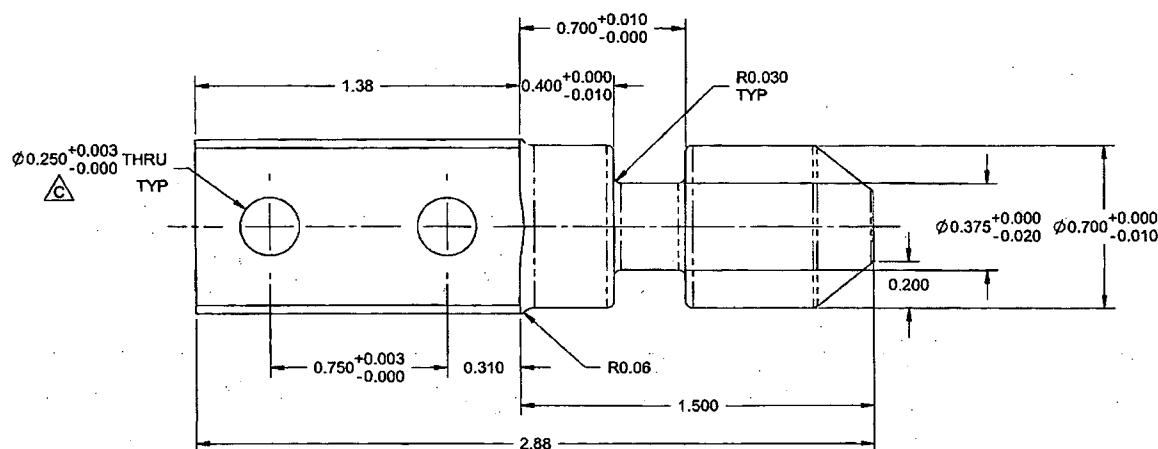
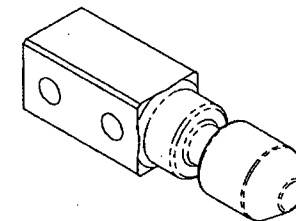
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DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**D4149-5 EYEBOLT STUD**

*W/ 7056*

**RELEASED**  
2011-02-24

**NOTES:**

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A276 OR A582  
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4149-5" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.32 lbs

DESIGN	MB	<b>DART AEROSPACE LTD</b>	
DRAWN	SC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		<b>D4149</b>	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		<b>AFT X-TUBE LUG ASSY</b>	NTS
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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